

IN THE CLAIMS:

Claim 1 (currently amended): A vacuum treatment installation, comprising:

a vacuum treatment chamber (1);

a plasma discharge configuration in the chamber;

a gas supply configuration connected to the chamber;

the plasma discharge configuration having at least two plasma beam discharge configurations (5, 9), each of said plasma beam discharge configurations having a pair of plasma generation areas that are spaced apart from each other and that face each other, thereby defining therebetween a discharge axis (A) that is substantially longer than any diameter of said discharge generation areas, said discharge axes of said at least two plasma beam discharge configurations being parallel to each other, with substantially parallel discharge axes (A) and at least one deposition configuration positioned along a surface (13) which extends at selected distances from the beam axes (A) and along a substantial section of the discharge beam longitudinal extension;

a gas suction configuration connected to the chamber;

the gas supply configuration (15) and the gas suction configuration (17) being connected to the vacuum chamber (1) such that a gas flow (G) through the chamber (1) is generated, which is substantially parallel to the discharge axes (A), and the deposition configuration is disposed between the discharge axes.

Claim 2 (original): An installation as claimed in claim 1, wherein at least one deposition configuration is formed by a workpiece support configuration for one or several workpieces (13a).

Claim 3 (original): An installation as claimed in claim 1, wherein at least one deposition configuration is formed by a substantially continuous planar configuration as a powder capture surface.

Claim 4 (previously presented): An installation as claimed in claim 1, wherein the plasma beam discharge configurations includes plasma beam discharge gaps between a cathode (5) and an anode (9) of each plasma beam discharge configuration, that are low-voltage high-current arc discharge gaps.

Claim 5 (original): An installation as claimed in claim 4, wherein the gaps are driveable independently of one another.

Claim 6 (original): An installation as claimed in claim 5, wherein gaps are cold cathodes.

Claim 7 (original): An installation as claimed in claim 5, wherein gaps are hot cathodes (5).

Claim 8 (original): An installation as claimed in claim 1, wherein the gas supply configuration (15) is connected to a gas tank configuration containing at least one of a carbon-, boron-, nitrogen-, hydrogen- or silicon-containing gas.

Claim 9 (new): A vacuum treatment installation, comprising:

a vacuum treatment chamber (1);

a plasma discharge configuration in the chamber;

a gas supply configuration connected to the chamber;

the plasma discharge configuration having at least two plasma beam discharge configurations (5, 9), each of said plasma beam discharge configurations having a pair of plasma generation areas that are spaced apart from each other and that face each other, thereby defining therebetween a discharge axis (A) that is substantially longer than any diameter of said discharge generation areas, said discharge axes of said at least two plasma beam discharge configurations being parallel to each other, and at least one deposition configuration positioned along a surface (13) which extends at selected distances from the beam axes (A) and along a substantial section of the discharge beam longitudinal extension;

a gas suction configuration connected to the chamber;

the gas supply configuration (15) and the gas suction configuration (17) being connected to the vacuum chamber (1) such that a gas flow (G) through the chamber (1) is generated, which is substantially parallel to the discharge axes (A), and the discharge axes (A) are disposed between two planar deposition configurations facing one another.

Claim 10 (previously presented): An installation as claimed in claim 9, wherein at least one deposition configuration is formed by a workpiece support configuration for one or several workpieces (13a).

Claim 11 (previously presented): An installation as claimed in claim 9, wherein at least one deposition configuration is formed by a substantially continuous planar configuration as a powder capture surface.

Claim 12 (previously presented): An installation as claimed in claim 9, wherein the plasma beam discharge configurations includes plasma beam discharge gaps between a cathode (5) and an anode (9) of each plasma beam discharge configuration, that are low-voltage high-current arc discharge gaps.

Claim 13 (previously presented): An installation as claimed in claim 12, wherein the gaps are driveable independently of one another.

Claim 14 (previously presented): An installation as claimed in claim 13, wherein gaps are cold cathodes.

Claim 15 (previously presented): An installation as claimed in claim 13, wherein gaps are hot cathodes (5).

Claim 16 (previously presented): An installation as claimed in claim 9, wherein the gas supply configuration (15) is connected to a gas tank configuration containing at least one of a carbon-, boron-, nitrogen-, hydrogen- or silicon-containing gas.